Air Quality Program

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Program Mission

Protect, preserve, and enhance the air quality of Washington to safeguard public health and the environment and support high quality of life for current and future generations.

Environmental Threats

Air quality concerns come in three forms: public health, environmental effects, and quality of life.

Air pollution causes lung disease and worsens existing respiratory and cardiopulmonary disease, sometimes hastening death for people afflicted with such diseases. Hundreds of studies have found that short- and long-term exposures to air pollution increase emergency room visits, hospitalizations, and medication use; cause absences from school and work; and restrict activity for some people.

Air pollution increases chronic respiratory illness; increases the overall death rate; increases the likelihood of contracting cancer; and decreases lung function in children, pre-disposing them to chronic, obstructive pulmonary disease as adults. Air pollution also affects the environment and quality of life in other ways, including: damage to soils, water, crops, vegetation, manmade materials, property, animals, and wildlife; impaired visibility; and, climate and weather. When air pollution creates noxious odors or irritating fumes, it can harm the economic value of homes and other types of real estate, as well as personal comfort and well-being.

Since the Washington State Legislature expanded statewide air quality efforts in 1991, overall air quality in Washington has greatly improved. Washington citizens save an estimated $2 billion per year in health costs and through economic benefits related to cleaner air. But even with current efforts, hundreds of people die each year from exposure to fine-particle pollution in Washington. A decade ago, 13 areas of Washington were designated as violating national ambient, health-based air quality standards for six chemicals known as "criteria" pollutants. More than three million people live within these areas. Additionally, special monitoring studies show the potential for violations in several new areas, such as Colville and parts of the Columbia plateau. Air quality has improved significantly in the state's major urban areas, and most are currently meeting healthy-air standards; Spokane, Wallula, and Yakima areas continue to be listed as violating standards, and a number of areas still remain close to violating one or more federal air-quality standards.

In addition to the six criteria pollutants, hundreds of other chemicals, known as toxic or hazardous air pollutants, enter the atmosphere from a wide variety of sources. These chemicals are not subject to national ambient, health-based standards. Because of limited air quality and health risk data for Washington State, the level of public health and environmental damage caused by toxic air pollutants is more uncertain than health risks associated with the criteria pollutants.

Authorizing Laws

- *Federal Clean Air Act*
- *Chapter 70.94 RCW, Clean Air Act*
- *Chapter 70.120 RCW, Motor Vehicle Emission Control*

Constituents/Interested Parties

- *Motorists, Transportation Agencies, and Motor Vehicle Related Businesses*
- *Business, Industry and Affiliated Trade Associations*
- *Wood Stove and Fireplace Users, Manufacturers, and Related Businesses such as dealers*
- *Agriculture Related Businesses*
- *General Public*

Major Activities and Results

The Air Quality Program established seven air quality goals described below.

Prevent Violations of Air Quality Standards
Federal law establishes healthy-air standards for six air pollutants known as criteria pollutants. Violations of standards trigger costly regulatory actions, impose economic constraints, and create

the potential for severe financial sanctions against the state if problem areas are not effectively cleaned up in a timely manner. To ensure standards are met, the agency continuously measures air pollution levels and trends, develops and implements area specific clean up plans, designs and implements customized strategies to prevent violations of federal standards, and develops and implements natural event action plans to minimize health impacts and ensure that wildfires, windblown dust, or other natural events do not place Washington in violation of federal standards.

The agency's goals are to have all dirty-air areas, known as nonattainment areas, reclassified as clean by the Environmental Protection Agency by the end of the 2003-05 biennium and to reduce outdoor air pollution to levels that assure future violations of health-based National Ambient Air Quality Standards will not occur. (Authorizing laws - Federal Clean Air Act, 70.94, and 70.120 RCW)

Result

Air quality standards in Washington State are met, public health problems associated with unsafe air are minimized, and federal sanctions are avoided.

- Measured air quality is good for 85% of all days and 99% of all measurements. Good air quality means ambient (outdoor) concentrations are less than one-half the national standards.
- Achieve no violations of ambient air quality standards.
- All areas of the state have attained clean air as classified and officially recognized by the Environmental Protection Agency.
- Complete a statewide assessment and prioritization of areas for their likelihood of violating standards.
- Design and implement strategies to address fine particle (particles that are small enough to lodge in the lungs when breathed) problems in Eastern Washington.

Reduce Health and Environmental Threats from Motor Vehicle Emissions

Mobile sources such as cars, trucks, construction equipment, locomotives, and marine vessels are responsible for over 60% of Washington's air pollution. These emissions have been shown to adversely affect public health, substantially add to health care costs, and increase cancer and mortality rates. Without significant emission reductions, the agency cannot reasonably assure future attainment of federal air quality standards, avoid the imposition of multi-million dollar control costs to businesses and citizens, nor reduce or prevent harmful health effects on citizens from toxics released by mobile sources. To protect public health and the environment from motor vehicle pollution, the agency implements a cost-effective vehicle emissions check program covering nearly two million cars and trucks, promotes transportation alternatives and cleaner motor vehicles and fuels through voluntary, regulatory and incentive programs, and retrofits school buses with better emission controls. (Authorizing laws - Federal Clean Air Act, 70.94, and 70.120 RCW)

Result

Motor vehicle emissions are minimized and managed, public health impacts from motor vehicle emissions are addressed, and federal sanctions for failure to meet standards are avoided.

- Reduce emissions from motor vehicles by 15% by 2005 and 35% by 2010.
- Reduce diesel soot emissions by 10% by 2004, 15% by 2005, and 50% by 2010.
- Equip 800 school buses with additional emission controls by July 2004 and 2000 buses by July 2005.
- Achieve a 50% reduction in bus idling at four schools.
- Implement a cost-effective motor vehicle emission check program that substantially reduces air pollution from cars and trucks.

- Develop a comprehensive diesel emissions reduction initiative that combines voluntary and regulatory elements to significantly reduce cancer and other health risks.
- Implement Engrossed Substitute Senate Bill 6072, which provides for installation of diesel school bus retrofit exhaust emission controls and cleaner fuels for school bus fleets.
- Partner with state, federal, and local agencies and the private sector to promote retrofit emission technology on fleets, transportation alternatives, the use of cleaner motor vehicles and fuels, and reduction of idling.

Reduce Air Pollution that Affects Views of Washington's Scenic Areas

Visibility is impaired even when air pollution is well below levels allowed by the federal health-based standards. Clear views within our national parks and wilderness areas, as well as views from outside these areas, are important to our economy and our quality of life. To enhance and preserve this cherished natural resource and to meet new federal requirements to reduce regional haze, the agency must develop and implement strategies that will significantly reduce visibility-impairing emissions. (Authorizing laws - Federal Clean Air Act and 70.94 RCW)

Result

This activity was eliminated through the legislative budget process. No resources will be used to support haze reduction work in the 2003-05 biennium.

Targets or Objectives that will not be met: Reduce human-caused visibility-impairing emissions by 25% by 2010 and by 50% by 2020.

Reduce Risk from Toxic Air Pollutants

Hundreds of toxic chemicals (totaling millions of pounds) are emitted into the air annually in Washington. No ambient standards and few emission limits have been established for these compounds. Emerging ambient assessments and toxics risk models indicate that the level and extent of airborne toxics pose significant health and environmental risks, including death, shortened lives, cancer, and other serious health effects.

The agency has identified 11 high-risk toxic air pollutants that are prevalent in Washington. The agency goal is to significantly reduce potential risk to the public of cancer and other serious health effects caused by airborne toxics. The agency will complete a health assessment of agricultural burning smoke; complete a health-effects analysis of diesel soot; collect and prepare annual air toxics emission inventories; operate air toxics monitoring sites; and limit toxic emissions through permit conditions for commercial facilities, combustion processes and outdoor burning. (Authorizing laws - Federal Clean Air Act and 70.94 RCW)

Result

The public health threat from toxic air pollutants is minimized.

Diesel soot is the highest priority air toxic in Washington. Work listed under the motor vehicle emission activity related to diesel emissions directly supports addressing this health issue.

- Less than 60% of facility-reported toxics released to the environment (Community Right to Know, Toxics Release Inventory) are air emissions and total tons of air toxics decrease by 5% by July 2005.
- Achieve a 50% reduction in emissions of priority toxics by 2010.
- Reduce diesel soot emissions by 10% by 2004, 15% by 2005, and 50% by 2010.
- Equip 800 school buses with new emission controls by July 2004, and 2000 by July 2005.
- Improve emissions inventories and understanding of ambient concentrations and sources of priority toxics.
- Evaluate and initiate appropriate strategies to reduce emissions of priority toxics.

Reduce Health and Environmental Threats from Smoke and Dust

Nagging regional smoke and dust pollution plagues many areas, primarily in Central and Eastern Washington, and affects public health and quality of life. To address these continuing problems, the agency conditions permits for agricultural, land clearing, fire training, and other outdoor burning where required by law; produces daily burn forecasts using local air quality, weather and burning demand information; responds to and resolves complaints related to smoke and dust; provides technical assistance to manage and prevent fugitive dust and outdoor burning impacts; designs and delivers community-

tailored woodstove education programs; and through technical assistance, research and demonstration projects, fosters development and use of practical alternatives to burning and improved dust mitigation. The agency's goal is to achieve air quality levels in Eastern and Central Washington by 2010 that experts agree is sufficient to protect human health. (Authorizing law - 70.94 RCW)

Result
Public health threats from smoke and dust are managed and minimized.

- Reduce emissions from cereal grain stubble burning by at least 50% by June 2005 using a 1998 baseline.
- Continue to improve and streamline the outdoor burning permit and smoke management systems.
- Audit local burn permit programs to ensure effective and efficient operation.
- Foster development and use of practical alternatives and best management practices for burning and dust mitigation through research, technical assistance and demonstration projects.

Reduce Air Pollution from Industrial and Commercial Sources
The agency issues permits to new and existing industrial and commercial facilities that emit significant levels of air pollution. Permit programs are mandated either by federal or state clean air law and are designed by law to be self supporting through fees. The agency provides technical assistance to businesses, permit application and processing guidance, interpretation of rules, pre-application assistance, and permit review. Permits are conditioned and approved to ensure all federal and state laws are met, and that air quality, the environment, and public health are protected. The agency develops and modifies industrial source regulations to incorporate federal and state law changes, simplify and streamline permit requirements, and ensure public health protection. The agency conducts compliance inspections and responds to and resolves complaints. The agency develops technical and policy direction on emerging industrial permit issues. (Authorizing laws - Federal Clean Air Act and 70.94 RCW)

Result
Air pollution from industrial and commercial sources are managed to protect public health and minimize costs and regulatory burdens.

- Reduce or prevent at least 10,000 tons of air emissions per year through permit conditions.
- Ensure 100% of permits meet timeliness targets.
- Provide certainty to the regulated community on the need for, content, and timeframes for permits.
- Improve timeliness of permit processing.
- Retain delegation and local control of federal permit programs.

Measure Air Pollution Levels and Emissions to Make Sound Policy Decisions
The agency needs sufficient, high quality information on the amount and sources of pollution and how it moves in the air to make reasoned air quality management decisions. The agency carries out three primary activities to collect needed data.

Air quality monitoring: The status of air quality is measured to provide data that allows assessment of trends, focused compliance, assessment of control strategies, health effects, and environmental damage.

Emission inventory development: Emission inventory is the quantification of the amount of pollution released by sources of air pollution.

Meteorological & modeling forecasts:
Meteorological forecasting and dispersion modeling are essential to understanding the movement and concentration of air pollutants, the carrying capacity of airsheds, the interactions of pollutants, and the point of maximum impact of pollution. (Authorizing Laws - Federal Clean Air Act and 70.94 RCW)

Result
Accurate and comprehensive air quality data is gathered, maintained, and evaluated over time to ensure informed policy decisions can be made.

- Conduct annual network review and modifications to meet air quality needs.
- No one is exposed to violations of standards.
- Air pollution is routinely measured where at least 85% of the population lives.
- Assure adequate data in both quantity and quality are available to policy makers.
- Take leadership to establish regional consortium for air quality forecast modeling.
- Continually update and improve emissions data and modeling tools to predict air quality levels, impacts and trends.
- Participate in region-wide, trans-boundary efforts to characterize air quality patterns.
- Provide support of ambient air monitoring sites in cooperation with outside agencies.

Major Issues

Growth Threatens Air Quality Gains
Air pollution levels in a number of Washington communities are within 10 percent of violating federal standards for smog (ozone), carbon monoxide, and fine particles. Population growth, more cars, and economic expansion can push emissions of air pollutants higher. It will take vigilance and the combined efforts of citizens, businesses, and governments to sustain our air quality gains.

Visibility and Regional Haze
Citizens complain when their views of Mt. Rainier, the Olympics, or the Columbia Gorge are obstructed by air pollution. Regional haze and visibility degradation also affect tourism, restrain economic growth, and diminish the quality of life for Washington residents. Federal law requires the state to eliminate human-caused visibility impairment in our national parks and wilderness areas by 2064. Businesses, governments, and citizens who have already controlled emissions to protect public health may have to further reduce emissions if they are found to contribute to the degradation of scenic views. Because budget cuts have eliminated the state's work to reduce haze, future decisions related to visibility protection will be made by the Environmental Protection Agency.

Outdoor Burning
Burning of unwanted trash and natural debris is a frequent occurrence in many areas of Washington. Our clean-air law governs where and what burning is allowable. The regulations implementing the law call for changes in burning practices and prohibitions. The trend toward tighter restrictions on burning produces conflicts in situations where the pressure or desire to burn is strong. In fact, the pressure to burn is increasing on many fronts. The demand for burning to remove agricultural and horticultural debris fluctuates along with changes in agriculture. Intentional burning in the forests is likely to increase as a part of restoring the health of forests. Pressure to reduce burning is also increasing. People don't like to be "smoked-out," and are demanding clean air. Fire safety professionals have increasing concerns about burning and fires getting out of control. The agency predicts that the pattern of frequent changes in burning programs will continue as state and local agencies struggle to find the balance between clean air, reasonable alternatives to burning, and necessary burning.

Motor-Vehicle Emission-Check Program
Emission inspections are required of all gasoline and diesel cars and trucks, five to 25 years old, in the Seattle, Tacoma, Spokane, and Vancouver areas. Because the Motor-Vehicle Emission Check Program affects nearly one million vehicle owners each year, the agency must ensure that the program meets both air quality and public service needs.

A new contractor began operating Washington's emission testing stations in July 2002. The new contract provided for improved air quality through upgraded testing procedures. To keep emission testing fees at $15 as required by state law, the agency was forced to close four emission testing stations in the Puget Sound area in 2002. To help reduce impacts on customers, information is provided to motorists regarding the best times to

take their vehicles to the test stations. Other customer service improvements include having test stations open Monday through Saturday (formerly, they were closed on Mondays), and accepting credit cards, which ends a 20-year cash-only policy.

Permitting New or Modified Industrial Facilities
Under state and federal law, new or modified industrial and commercial air pollution sources that increase emissions must install best available control technology for the pollutants where emissions increase. The federal permit process is complex, time consuming, and applies to major emissions increases and selected pollutants. States must receive approval from the Environmental Protection Agency (EPA) to carry out the federal program; otherwise, EPA would issue separate permits. The federal program has been highly criticized, EPA has recently issued a series of controversial rule changes that are under legal challenge, and EPA plans to roll out a continuing series of rule changes over the next several years. Stability of the federal program will likely not occur until late this decade.

The Competitiveness Council and others in the business community recommended that the state move as quickly as possible to gain full EPA approval of its permit program to eliminate duplication, minimize federal involvement in the state permit process, and help expedite permit decisions. Until stability returns to the federal program, the state cannot obtain full approval. The agency has decided in the near term to focus on improving and streamlining parts of the permit process the state can control. This approach should minimize administrative process while increasing clarity, certainty, and timeliness of permit decisions for about 99% of affected businesses.

Responding to Climate Change
Consistent with Governor Locke's directive, the state has begun rule-making to partially offset carbon dioxide emissions from new, fossil fuel burning electrical generating plants that provide power to the grid. The Department of Ecology and the Energy Facility Site Evaluation Council (EFSEC) will develop identical offset requirements and apply them to new power plants that fall within each agency's jurisdiction (EFSEC regulates power plants 350 megawatts or larger). Rules are expected to be completed by summer 2004.

Again under Governor Locke's directive, the agency is expecting to assist with design and implementation of a West Coast global warming and clean energy strategy. Potential areas for agency involvement as mentioned by the three west coast governors include marine vessel and truck stop idling reduction strategies, increasing fuel efficiency of the state vehicle flee, and improving inventories of greenhouse gas emissions.

Reducing Diesel Soot
Engrossed Substitute Senate Bill 6072 passed by the Legislature in the 2003 session provides funding to the Department of Ecology and the state's seven local air agencies primarily to place emission controls on existing diesel school buses. The goals are to significantly reduce air pollution and public health risk to children from emissions from school buses, maximize cost effectiveness and efficiency in use of appropriated dollars, and sustain or increase private sector employment. In conjunction with the Department of General Administration, the agency has established a centralized state contract and hired a private sector employer to conduct fleet surveys and provide and install emission control hardware. Through centralization and combined purchasing power, the contract, effective November 2003, has reduced equipment costs by 25%, eliminated duplicative and time consuming contract and grant processing by state and local agencies, provided a contractor who is familiar with public school bus fleets and trusted by fleet managers, and guarantees equitable, fair pricing for equipment installation statewide.

The Department of Ecology has established clear roles and responsibilities for involved agencies. School districts, the Office of the Superintendent of Public Instruction, school district fleet managers, and local agency staff will be educated on the legislation, emission control technology, how to best use the state contract, and how to use state funding to leverage additional federal funds. By November 2003, over 50 school districts had applied to have nearly 1,000 of the older and most polluting buses upgraded with cleaner emissions control technology. These buses represent only 10% of the diesel school bus fleet, but are

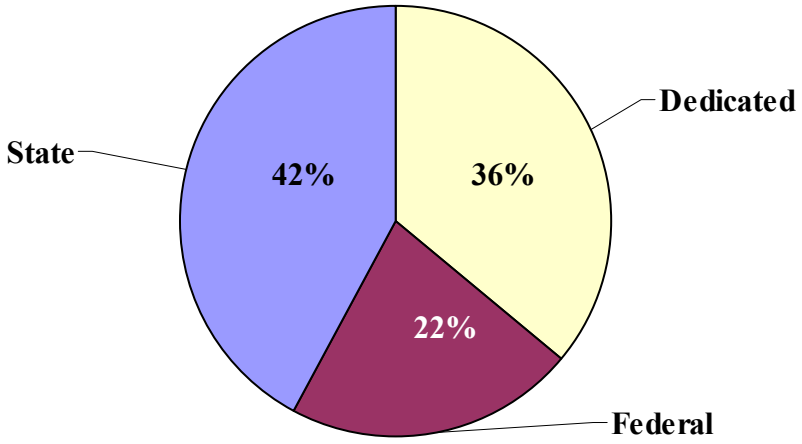
responsible for about 75% of soot emissions. Fleet evaluations began in November 2003, and installation of cleaner technology starts in early 2004. A report to the Legislature on costs, benefits, problems, successes, and future needs is due December 2004.

Air Quality Program Budget

Budget $37,379,955; Staffing: 102.8 FTEs

State	($) Amount	Sources	Uses
General Fund – State	15,833,018	Multiple; vehicle emissions inspections fee	Ambient air monitoring, grants to local air authorities, new source permits, modeling and meteorology, emission inventory, vehicle emission testing.
Federal			
General Fund – Federal	8,074,281	Federal grants	State and local air authority grants for ambient air monitoring, emission inventory, modeling, meteorology, and other air quality activities. Includes special project grants.
Dedicated Funds			
Air Operating Permit	1,839,435	Permit Fees collected for air contaminant sources	Issuing permits to major air pollution sources, small business technical assistance.
Air Pollution Control	11,194,046	Air registration fees; burning permit fees; vehicle transfer fees	Registration program, agricultural burning permitting, burning alternatives research; school bus retrofit program
Woodstove Education & Environment	349,175	Fees on the retail sale of woodstoves and fireplaces	Enforcement and education on proper woodstove use, grants to local air authorities.
Environmental Excellence	76,000	Involved entity	Activity associated with the Environmental Excellence project.
Grass Seed Burning Research	14,000	Fees on open burning of grasses grown for seed	Research on alternatives to grass seed burning.
TOTAL	**$37,379,955**		

Air Quality Program
Dollars by Fund Source



Air Quality Program
Dollars by Activity